



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2013-0555; Directorate Identifier 2010-SW-047-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Eurocopter Deutschland GmbH Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for Eurocopter Deutschland GmbH (ECD) Model EC135 and MBB-BK 117 C-2 helicopters. This proposed AD is prompted by the discovery during a routine inspection of loose flight control bearings because of incorrect installation. This proposed AD would require inspecting the flight-control bearings repetitively, replacing any loose bearing with an airworthy flight-control bearing, and installing bushings and washers. The proposed actions are intended to prevent the affected control lever from shifting, contacting the helicopter structure, and reducing control of the helicopter.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- **Fax:** 202-493-2251.

- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed AD, contact American Eurocopter Corporation, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <http://www.eurocopter.com/techpub>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, TX 76137.

**FOR FURTHER INFORMATION CONTACT:** Matt Fuller, Senior Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone (817) 222-5110; email [matthew.fuller@faa.gov](mailto:matthew.fuller@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued AD No. 2010-0058, dated March 30, 2010, (AD 2010-0058), to correct an unsafe condition for the ECD Model MBB-BK 117 C-2, EC 135 and EC 635 helicopters. EASA advises that during an inspection of an MBB-BK 117 C-2, “bearings were detected which had not been correctly fixed.” As some bearings on the EC 135 and MBB-BK 117 C-2 type designs are installed with the same procedure, they are equally affected by the possibility of the unsafe condition. EASA states that this condition, if not

corrected, could result in the affected control lever shifting in the axial direction, contacting the helicopter structure, and subsequently reducing control of the helicopter.

### **FAA's Determination**

These helicopters have been approved by the aviation authority of the Federal Republic of Germany and are approved for operation in the United States. Pursuant to our bilateral agreement with Germany, EASA, its technical representative, has notified us of the unsafe condition described in its AD. We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

### **Related Service Information**

Eurocopter has issued Alert Service Bulletin (ASB) MBB BK117 C-2-67A-010, Revision 3, dated February 8, 2010, and ASB EC135-67A-019, Revision 3, dated December 16, 2009.

These ASBs specify:

- Within the next 50 flight hours (FHs), inspecting the affected bearings and, if necessary, rebonding any affected bearings or replacing the lever assembly.
- Within 12 months, retrofitting bushings on the levers to prevent movement of the bearings.
- After the retrofit, repeating the inspection every 800 FHs or 36 months for the Model EC 135 helicopters, whichever comes first, and 600 FHs or 24 months, whichever comes first, for the Model MBB-BK 117 C-2 helicopters.

EASA classified these ASBs as mandatory and issued AD 2010-0058 to ensure the continued airworthiness of these helicopters.

### **Proposed AD Requirements**

For EC135 helicopters, this proposed AD would require, within 100 hours time-in-service (TIS) or at the next annual inspection, whichever occurs first, modifying the left-hand (LH) and right-hand (RH) guidance units and the cyclic shaft by installing bushings and washers to prevent shifting in the axial direction. This proposed AD would require at intervals not to exceed 800 hours TIS or 36 months, whichever occurs first, inspecting the bearings in the LH guidance unit, the RH guidance unit, cyclic control, upper guidance unit, and linear voltage differential transducer plate for play. If any bearing is loose, the proposed AD would require replacing the affected bearing with an airworthy bearing.

For MBB-BK 117 C-2 helicopters, this proposed AD would require, within 100 hours TIS or at the next annual inspection, whichever occurs first, modifying the LH and RH guidance units and the lateral control lever by installing bushings and washers to prevent shifting of the bearings in the axial direction. This proposed AD also would require at intervals not to exceed 600 hours TIS or 24 months, whichever occurs first, inspecting the bearings in the RH guidance unit, LH guidance unit, and lateral control guidance unit for play. If any bearing is loose, the proposed AD would require replacing the affected bearing with an airworthy bearing.

### **Differences between this Proposed AD and the EASA AD**

Differences between this proposed AD and the EASA AD are:

- The EASA AD is applicable to the EC 635 helicopter, whereas this proposed AD is not because the EC 635 helicopter is not type certificated in the U.S.
- The EASA AD requires an initial inspection within 50 flight hours or one month,

whichever occurs first after May 31, 2008, and a modification within the next 12 months. This proposed AD would require the modification within 100 hours TIS or at the next annual inspection, whichever occurs first, and no inspection until after the modification has been accomplished.

- The EASA AD provides requirements for certain spare parts, whereas this proposed AD does not.

### **Costs of Compliance**

We estimate that this proposed AD would affect 175 Model EC135 and 112 Model MBB-BK 117 C-2 helicopters of U.S. Registry and that labor costs average \$85 per work-hour. Based on these estimates, we would expect the following costs:

- For EC135 helicopters, it would take about 32 work-hours to perform the modification. Parts would cost about \$312. The total cost for the modification would be about \$3,032 per helicopter and \$530,600 for the U.S. operator fleet. The repetitive inspections would require 6.5 work-hours for a cost of about \$553 per helicopter and about \$96,775 for the fleet per inspection cycle.
- For MBB-BK 117 C-2 helicopters, it would take about 32 work-hours to perform the modification. Parts would cost about \$396. The total cost for the modification would be \$3,116 per helicopter and \$348,992 for the U.S. operator fleet. The cost for the repetitive inspections thereafter would be about \$85 per helicopter and \$9,520 for the fleet per inspection cycle.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by Reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**EUROCOPTER DEUTSCHLAND GmbH:** Docket No. FAA-2013-0555; Directorate Identifier 2010-SW-047-AD.

#### **(a) Applicability.**

This AD applies to the following helicopters, certificated in any category:

(1) Eurocopter Deutschland GmbH (ECD) Model EC135 P1, P2, P2+, T1, T2, and T2+ helicopters, serial number (S/N) 0005 through 00829, with a tail rotor control lever, part number (P/N) L672M2802205 or L672M1012212; cyclic control lever, P/N L671M1005250; collective control lever assembly, P/N L671M2020108; or collective control plate, P/N L671M5040207; installed; and

(2) Model MBB-BK 117 C-2 helicopters, S/N 9004 through 9310, with a tail rotor control lever assembly, P/N B672M1007101 or B672M1807101; tail rotor control lever, P/N B672M1002202 or L672M2802205; or lateral control lever assembly, P/N B670M1008101, installed.



**(b) Unsafe Condition.**

This AD defines the unsafe condition as incorrectly installed flight control bearings. This condition could cause the affected control lever to shift and contact the helicopter structure, resulting in reduced control of the helicopter.

**(c) Comments Due Date.**

We must receive comments by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**(d) Compliance.**

You are responsible for performing each action required by this AD within the specified compliance time.

**(e) Required Actions.**

(1) For Model EC135 P1, P2, P2+, T1, T2, and T2+ helicopters:

(i) Within the next 100 hours time-in-service (TIS) or at the next annual inspection, whichever occurs, modify the left-hand (LH) and right-hand (RH) guidance units and the cyclic shaft by installing bushings and washers to prevent shifting of the bearings in the axial direction as follows:

(A) Remove and disassemble the LH guidance unit and install a bushing, P/N L672M1012260, between the bearing block and the lever of the LH guidance unit as depicted in Detail A of Figure 5 of Eurocopter Alert Service Bulletin EC135-67A-019, Revision 3, dated December 16, 2009 (EC135 ASB).

(B) For helicopters without a yaw brake, remove and disassemble the RH guidance unit and install a bushing, P/N L672M1012260, between the bearing block and the lever as depicted in Detail B of Figure 5 of EC135 ASB.

(C) Remove and disassemble the cyclic shaft and install a washer, P/N L671M1005260, between the bearing block and the lever as depicted in Detail C of Figure 6 of EC135 ASB.

(D) Remove the collective control rod from the bellcrank and install a washer, P/N L221M1042208, on each side of the collective control rod and bellcrank as depicted in Detail D of Figure 6 of EC135 ASB.

(E) At intervals not to exceed 800 hours TIS or 36 months, whichever occurs first, inspect the bearings in the LH guidance unit, RH guidance unit, cyclic control, upper guidance unit, and linear voltage differential transducer plate for play. If any bearing is loose, replace the affected bearing with an airworthy bearing.

(2) For Model MBB-BK 117 C-2 helicopters:

(i) Within the next 100 hours TIS or at the next annual inspection, whichever occurs first, modify the LH and RH guidance units and the lateral control lever by installing bushings and washers to prevent shifting of the bearings in the axial direction as follows:

(A) Remove and disassemble the RH guidance unit and install a bushing, P/N L672M1012260, between the lever and the bracket as depicted in Detail B of Figure 4 of Eurocopter Alert Service Bulletin MBB BK117 C-2-67A-010, Revision 3, dated February 8, 2010 (BK117 ASB). Remove and disassemble the LH guidance unit and install a bushing, P/N L672M1012260, between the lever and the bracket as depicted in Detail C of Figure 4 of BK117 ASB.

(B) Remove the lateral control lever and install new bushings in accordance with the Accomplishment Instructions, paragraphs 3.C(9)(a) through 3.C(9)(g), of BK 117 ASB.

(C) Identify the modified lever assembly by writing “MBB BK117 C-2-67A-010” on the lever with permanent marking pen and protect with a single layer of lacquer (CM 421 or equivalent).

(D) Apply corrosion preventive paste (CM 518 or equivalent) on the shank of the screws and install airworthy parts as depicted in Figure 5 of BK117 ASB.

(E) At intervals not to exceed 600 hours TIS or 24 months, whichever occurs first, inspect the bearings in the RH guidance unit, LH guidance unit, and lateral control guidance unit for play. If any bearing is loose, replace the affected bearing with an airworthy bearing.

**(f) Alternative Methods of Compliance (AMOC).**

(1) The Manager, Safety Management Group, FAA, may approve AMOCs for this AD. Send your proposal to: Matt Fuller, Senior Aviation Safety Engineer, Safety Management Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone (817) 222-5110; email [matthew.fuller@faa.gov](mailto:matthew.fuller@faa.gov).

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information.**

The subject of this AD is addressed in European Aviation Safety Agency (EASA) AD No. 2010-0058, dated March 30, 2010. You may view the EASA AD at <http://www.regulations.gov> in Docket No. FAA-2013-0555.

**(h) Subject.**

Joint Aircraft Service Component (JASC) Code: 6710, Main Rotor Control.

Issued in Fort Worth, Texas, on June 18, 2013.

Kim Smith,

Directorate Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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